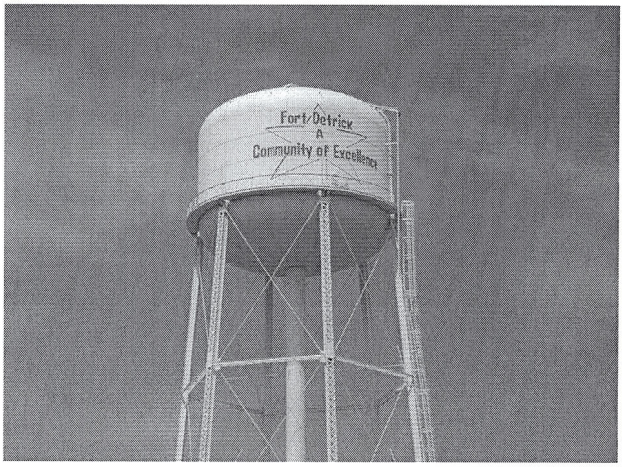
Fort Detrick Drinking Water Quality Report

Calendar Year 2008

We are pleased to provide the 2008 Annual Drinking Water Quality Report. The report is presented to inform the Fort Detrick community on the quality of drinking water delivered to our customers. The Fort Detrick Directorate of Installation Services (DIS) and Environmental Management Office (EMO) are committed to providing our customers with safe and reliable drinking water. Drinking water provided to our customers has once again met or surpassed strict Environmental Protection Agency (EPA) and Maryland Department of the Environment (MDE) standards for safety and quality. Further, we take pride returning clean water to the environment resulting from treatment of our sanitary wastes.



As required by the "Consumer Confidence Reporting Rule" of the Safe Drinking Water Act (SDWA), community water systems are obligated to provide an annual report on the water quality to the consuming public. This report fulfills the SDWA requirements for the water produced and delivered by Fort Detrick. Presented in this report is information on the source of our water, its constituents and the health risks associated with any contaminants.

Inside this issue:

Prepared by:
Environmental Management Office

For
US Army Garrison
Fort Detrick, Maryland

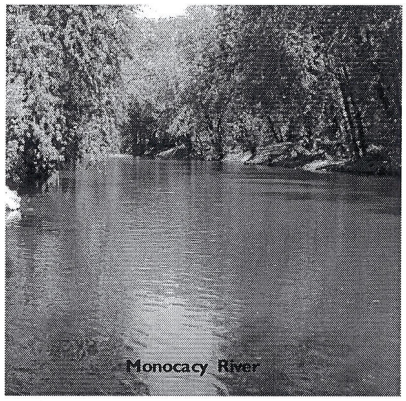
Fort Detrick Drinking Water Quality Report

Source of Your Drinking Water

Fort Detrick is permitted to withdraw water from local resources in accordance with permits regulated by the MDE. Source water is withdrawn from the Monocacy River and processed at the Fort Detrick Water Treatment Plant located approximately 1.5 miles east of Area A near the intersection of MD26 and MD355. The average water production during calendar year 2008 was 1.09 million gallons per day. In general, sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

What's in the Drinking Water?

All sources of drinking water, including bottled water, are subject to potential contamination by sources that are naturally occurring or man-made. Potential sources of contamination for the Monocacy River watershed include point and non-point sources, including transportation, agriculture, on-site septic systems and runoff from developed areas. A susceptibility analysis conducted by the MDE indicates that turbidity, disinfection by-product precursors, and pathogenic (capable of causing disease) microorganisms are the contaminants of most concern. Sampling for microorganisms in the Monocacy River indicates the highest concentrations were found during storm events. Nutrient enrichment, algal blooms



and natural organic matter all contribute to the creation of disinfection by-product precursors. Decaying organic matter decreases the availability of oxygen in the river and algae growth increases the total organic carbon in the water. The reaction of organic carbon with disinfectants used in the water treatment process results in the production of disinfection by-products in the treated water. High turbidity levels are associated with erosion and transport of sediment during storm events. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

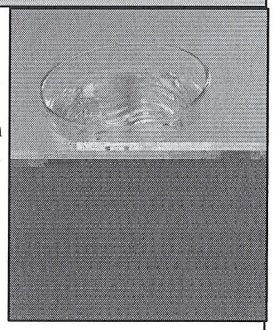
Vulnerable Community Members

Some groups of people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as: persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. At risk people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 800-426-4791.

Plumbing Problems and Repairs

Fort Detrick residents should contact Balfour Beatty Communities at 240-379-6518 for plumbing repairs. Authorized personnel at administrative and industrial facilities should contact the DIS trouble desk at 301-619-2726 for plumbing repairs.

Monitoring of Your Drinking Water



We are proud to provide safe and dependable drinking water to the Fort Detrick community. In order to ensure that the tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. As shown in the table: "Analyte/Contami nant Groups and Monitoring Frequency", we continually monitor the drinking water for contaminants to ensure quality. Tap water provided to our customers has met all USEPA and MDE drinking water health and safety standards.

Our water system uses only EPA-approved laboratory methods to analyze your drinking water. Our personnel collect water samples from the distribution system. These samples are then shipped to an accredited laboratory where a full spectrum of water quality analyses is performed. At Fort Detrick, we monitor for the contaminant groups listed in the left column of the following table using EPA-approved methods. The right column of the table specifies the monitoring frequency for these contaminant groups.

Analyte/Contamin ant Groups and Monitoring Frequency Table

Analyte/Contamin ant Group	Monitoring Frequency
Arsenic	Once yearly
Fluoride	Once yearly
Nitrate	Once yearly (1st quarter)
Metals (Phase II/V)	Once yearly
Atrazine	Once yearly (2nd quarter)
SOC (Phase II/V)[1]	Once yearly Samples taken by MDE.
SOC (Method 525)	Twice yearly (2 quarters yearly)
VOC[2]	Once yearly
Gross Alpha[3]	Every 9 years (Due in 2012) Samples taken by MDE.
Radium -228	Every 9 years (Due in 2012) Samples taken by MDE.
Total Haloacetic Acids	Four times yearly (4 quarters yearly)
Total Trihalomethanes	Four times yearly (4 quarters yearly)
Bacteriologic samples	8 per month
Total Organic Carbon	1 set per quarter
Lead	20 samples for triennial (3 yr) period taken between 01 Jun and 30 Sep. (Due 2009)
Copper	20 samples for triennial (3 yr) period taken between 01 Jun and 30 Sep. (Due 2009)

1 - Synthetic Organic Contaminants (SOC) include Carbofuran, Dalapon and 2,4 -D.

2 - Volatile Organic Contaminants (VOC) include Benzene, Styrene and Toluene.

3 - Gross Alpha emitters.

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Definitions of Key Terms/Acronyms Used in this Report

CDC Centers for Disease Control and Prevention; serves as the National focus for developing and applying disease prevention and control, environmental health, and health promotion and education activities.

EPA Environmental Protection Agency; Federal governing agency for the regulation of drinking water quality.

FDA Food & Drug Administration; Federal governing agency which establishes limits for contaminants in food and bottled beverages.

MCL Maximum Contaminant Level; The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MDE Maryland Department of the Environment; State governing agency for the regulation of drinking water quality.

MGD Million gallons per day.

NTU Nephelometric turbidity unit; a measure of turbidity in water

ppb parts per billion; a unit of measure equivalent to a single penny in $10,000,000. Generally equivalent to micrograms per liter.

ppm parts per million; a unit of measure equivalent to a single penny in $10,000. Generally equivalent to milligrams per liter.

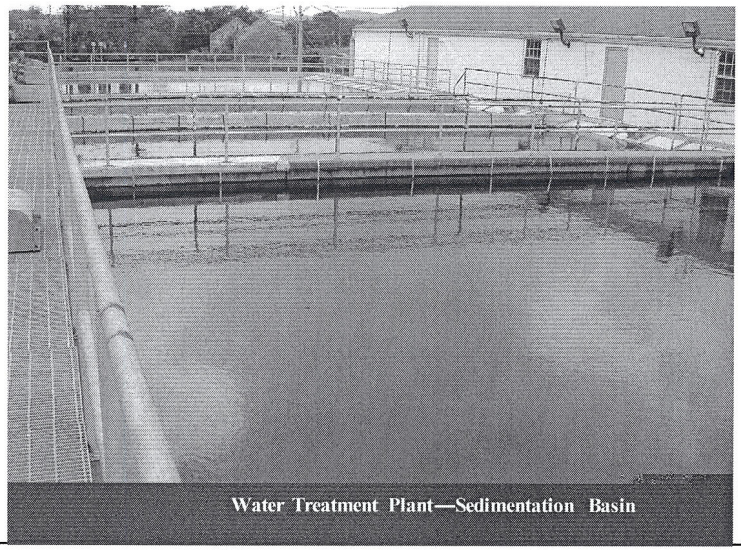
SDWA Safe Drinking Water Act; Federal law which sets forth drinking water regulations.

Total Haloacetic Acids (HAA) Byproducts of drinking water disinfection. Includes monochloroacetic acid, monobromoacetic acid, dichloroacetic acid, trichloroacetic acid, bromochloroacteic acid and dibromoacetic acid.

Total Trihalomethanes (TTHMs) Byproducts of drinking water chlorination. Includes chloroform, bromodichloromehtane, dibromochloromethane, and bromoform.

Treatment Technique (TT) A required process intended to reduce the level of a contaminant in drinking water.

Turbidity A measure of the cloudiness of water. It is used to indicate water quality and filtration effectiveness (e.g., whether disease-causing organisms are present).



Water Treatment Plant—Sedimentation Basin

Monitoring Results

The following table presents sampling results for the 2008 reporting period. **In addition to required sampling tabulated below, Fort Detrick tests for over one hundred other regulated and unregulated contaminants.** None of these additional contaminants were detected in our samples.

Results Table - Detected Contaminants

Contaminant	MCL[1]	Level Found	Range	Sample Date	Within Standards
Nitrate	10 ppm	3.7 ppm	N/A	08 January 2008	Yes
Barium	2.0 ppm	0.0239 ppm	N/A	10 April 2008	Yes
Fluoride	4.0 ppm	0.51 ppm	N/A	08 January 2008	Yes
Total Haloacetic Acids	60 ppb[2]	31.3 ppb[2]	2.9-76.6 ppb	10 January, 10 April, 14 July, 28 October 2008	Yes
Total Trihalomethanes	80 ppb[2]	52.9 ppb[2]	21.8-101.2 ppb	10 January, 10 April, 14 July, 28 October 2008	Yes
Turbidity	See footnote 3	<0.3 NTU[3] (95% of measurements)	0.016-0.987 NTU[3]	Highest reading – 17 November 2008	Yes
Cryptosporidium [4]	N/A	1.6 oocysts/L	0.087-1.6 oocysts/L	Highest reading – 05 March 2008	N/A

1 *Applicable State, Local, or Federal MCL, TT, or AL value.*

2 *Disinfection By-Products cannot exceed running annual average of 60 ppb for total haloacetic acids and 80 ppb for total trihalomethanes. The "Level Found" column indicates the maximum running annual average for 2008. The "range" column indicates individual concentrations used to calculate the running annual average.*

3 *The turbidity level of representativ e samples of our system's filtered water must be less than or equal to 0.3 NTU in at least 95 percent of the measurements taken each month. Turbidity levels cannot exceed a maximum limit of 1.0 NTU at any time.*

4 *The Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) requires source water cryptosporidium monitoring. Treatment plant filtration process removes microbial pathogens from source water.*

Prescription Drug Disposal

A prescription drug disposal fact sheet has been attached to inform the public of the environmental impacts of prescription drugs in our water ways and disposal recommendations.

Bottled vs. Tap Water

Bottled water comes in glass and plastic containers. If not recycled, these containers are disposed in landfills throughout the world. It takes approximately 1,000 years for one plastic bottle to decompose. It is just as easy and more economically and much more environmentally friendly to buy a reusable water bottle and refill it using tap water.

Water Conservation

It is the responsibility of all Fort Detrick residents and work force to conserve water. Saving water is saving money and a very valuable natural resource. Two water conservation facts sheets are attached. In the event of a drought, the Installation Commander may direct strict water conservation measures for Fort Detrick water customers.

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Common Sources of Contaminants and Potential Health Effects

Contaminant	Potential Health Effects	Common Sources of Contaminant
Nitrate	Infants below the age of six months who drink water containing nitrate in excess of MCL could become seriously ill. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use, leaching from septic tanks, sewage; erosion of natural deposits.
Barium	Barium in excess of MCL can cause an increase in blood pressure.	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride	Fluoride in excess of MCL can cause an increase in bone disease (pain and tenderness of the bones); children may get mottled teeth.	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories.
Total Haloacetic Acids	Total Haloacetic Acids in excess of MCL can cause an increased risk of cancer.	By-product of drinking water disinfection.
Total Trihalomethanes	Total Trihalomethanes in excess of MCL can cause an increase in liver, kidney or central nervous system problems; increased risk of cancer.	By-product of drinking water chlorination.
Turbidity	Higher turbidity levels are often associated with higher levels of disease-causing microorganisms such as viruses, parasites and some bacteria. These organisms can cause symptoms such as nausea, cramps, diarrhea, and headaches.	Soil runoff.
Cryptosporidium	Gastrointestinal illness (e.g., diarrhea, vomiting and cramps)	Human and fecal animal waste

Lead and Copper Rule

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Fort Detrick Water Treatment Plant is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the EPA Safe Drinking Water Hotline at 1-800-426-4791 or at http://www.epa.gov/safewater/lead.

Cryptosporidium (microbial pathogens)

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Monitoring indicates the presence of these organisms in our source water. Although filtration removes cryptosporidium, filtration methods cannot guarantee 100 percent removal. Current test methods do not allow us to determine if the organisms are capable of causing disease. Cryptosporidium must be ingested to cause disease, and may be spread through means other than drinking water. There have been no known health concerns at Fort Detrick from microbial pathogen ingestion from drinking water.

Public Involvement

For additional information concerning the Fort Detrick Consumer Confidence Report, please contact the Fort Detrick Environmental Management Office at 301-619-3136.

Drinking Water Treatment Process

Source Water Withdrawal Fort Detrick is permitted to withdraw a daily average of 2.0 million gallons a day (MGD) on a yearly basis and a maximum daily withdrawal of 2.5 million gallons from the Monocacy River. The average water production during calendar year 2008 at Fort Detrick was 1.09 million gallons per day.

Coagulation Coagulants such as aluminum sulfate (alum) are rapidly mixed with the water. This process neutralizes the small particles allowing them to attach to each other to form larger particles.

Flocculation After coagulants are added, the water is gently mixed to cause sediment particles to combine and grow large enough to settle.

Sedimentation Water flows very slowly through sedimentation basins allowing the particles to settle to the bottom.

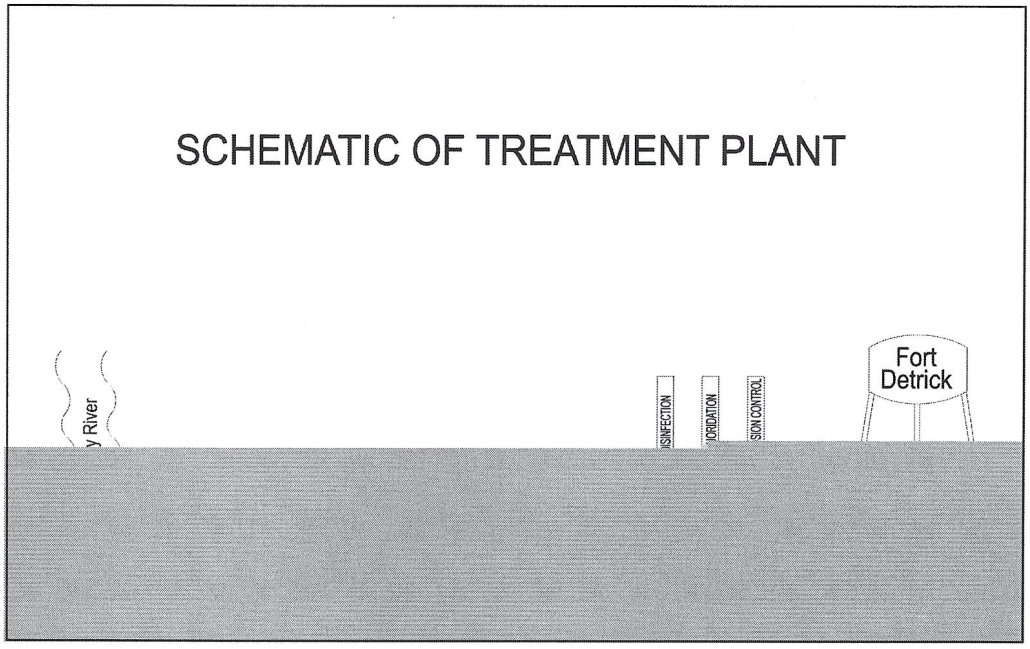
Filtration Water flows through filter beds made of layers of coal (anthracite) and sand. The filter beds trap any particles remaining in the water.

Disinfection The addition of chlorine to the water kills virtually all recognized pathogenic microorganisms but not necessarily all microbial life. Primary disinfection initially kills all bacteria and viruses. Secondary disinfection maintains a disinfectant residual that prevents regrowth of microorganisms in the water distribution system.

Fluoridation Fluoridation of the drinking water is conducted as a preventive measure to enhance community health by strengthening tooth enamel and decreasing tooth decay. Fort Detrick began fluoridating drinking water distributed to the community in March 2005 similar to what is occurring with the drinking water supplied by the City of Frederick.

Corrosion Control Calcium hydroxide (lime) is added to the water to control corrosion in distribution piping and consumer plumbing. This also keeps substances like lead and copper from leaching out of plumbing into the drinking water.

Distribution and Storage The distribution system consists of miles of piping used for the conveyance of drinking water to our customers. The distribution system further consists of three (3) drinking water storage tanks with a total capacity of 1.3 million gallons. The drinking water tanks are used to maintain adequate storage and water pressure for our customers and fire fighting purposes.



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